THE BULLETIN

Monthly News from ENERGY STAR Buildings℠ and Green Lights®

November 2, 1999

Electric Utility Restructuring and Energy Efficiency

The restructuring of the electric power industry has presented a number of challenges and opportunities for electricity consumers. Chief among them is the overwhelming array of energy-related purchasing and management decisions necessary to make the most cost-effective energy choices.

For energy and facility managers, restructuring means an opportunity to obtain lower-cost electricity for your facilities. The route to maximizing energy and cost savings involves both a long-term plan to reduce the price of electricity through rate negotiation and a coordinated effort to reduce energy consumption and peak load. Proactive consumers will be the first to experience the most savings. In this rapidly changing environment, knowledge is power – both figuratively and literally.

Tips to Obtain Maximum Savings

To date, twenty-one states have enacted electric utility restructuring legislation and many others are in the process of developing restructuring strategies. Whether your state has already enacted utility restructuring legislation or plans to do so in the near future, now is the time to start planning for the future of your organization's electricity needs. Below are some tips to help you position your organization's facilities to gain maximum energy and cost savings in a restructured electric utility environment.

Know Your Energy Use and Costs

- What are your typical seasonal energy-use patterns?
- What is your typical load profile?
- What loads can you control or reduce?
- How does your rate structure influence your costs?

Keep Informed

- Read, network, and attend conferences.
- Know your options: on-site generation, central utility plants, municipalization, load aggregation and alternative fuel sources.

Talk to Your Utilities

- Meet with your electricity provider to explore new rate options and metering arrangements.
- Aggressively seek out offers from multiple utilities. Consider multi-year commitments, but avoid long contract terms.

Aggregation

- Consider joining a competitive user group; strength in numbers can provide a competitive edge in negotiations with utility providers.

Load Reduction

- Reduce peak energy consumption through energy-efficient upgrades, co-generation, and/or shifting to off-peak use.
- Specify high-efficiency, ENERGY STAR℠-Labeled building systems and office equipment.
- Evaluate alternative fuels frequently for new equipment choices.

Web Site Information

ENERGY STAR Buildings℠ and Green Lights®
www.epa.gov/buildings

ENERGY STAR® Label for Buildings
www.epa.gov/buildinglabel

Ally Services and Products (ASAP) Directory
www.epa.gov/asap

EPA Green Lights
an ENERGY STAR program

New Allies

EPA would like to congratulate the following Allies who have recently joined ENERGY STAR Buildings:

Commercial Air, Power & Cable, Inc.
Corporate Energy Management Systems, Inc.
ECS, Inc.
Electric City of Pennsylvania
Intellinet Controls Corporation
RLW Analytics
SE Utility Consultants
TechLite Applied Sciences, Inc.
The Bulb Man
The Farfield Company
The Penn Air Group
Williams Notaro & Associates

New Partners

EPA would like to congratulate the following Partners who have recently joined ENERGY STAR Buildings:

Accuride Corporation, Headquarters Division
American University at Washington, DC
BWX Technologies, Inc.
Covenant HealthCare
International Business Machines
Saint Michael's Hospital, Ministry Healthcare
University of Illinois at Urbana-Champaign
University of West Florida at Pensacola
Utah Department of Community & Economic Development

Look for Local Co-Generation Projects

- A local co-generator may have excess capacity that it would like to sell to neighboring facilities. Solicit proposals from these firms and seek joint ventures with other large users nearby.

Green Power

In a restructured electricity market, some consumers will want to know more about the origin of their electricity and how its generation affects the environment. In 1998, 85 percent of the electricity consumed in the U.S. was generated through the combustion of fossil fuels, including coal, petroleum and natural gas[1]. Preliminary EPA estimates indicate that electric utilities were collectively the largest producers of CO_2 emissions from fossil fuel combustion in the U.S., accounting for 37 percent in 1998[2]. When burned to produce electricity, fossil fuels emit high levels of carbon dioxide, nitrogen oxide, and sulfur dioxide, which contribute to global warming, smog and acid rain.

U.S. Electric Utility Generation 1998 (Million Kilowatt-hours)

Power Source	KWH
Coal	1,807,480
Nuclear	673,702
Gas	309,222
Hydroelectric	308,844
Petroleum	110,158
Geothermal	5,176
Biomass	2,024
Wind	3
Photovoltaics	2.5

Energy Information Administration, Electric Power Monthly, September 1999.

Although green power accounts for less than ten percent of the electric power produced in the U.S., new technological developments and a blossoming interest in sustainable energy supplies are helping to foster a market for renewable energy sources. With deregulation, ENERGY STAR Buildings and Green Lights Partners can help reduce carbon emissions by purchasing a percentage of their electricity from renewable, 'green' power sources, including water, solar, wind, geothermal and biomass. Renewable energy technologies can help us develop a sustainable energy future, reduce dependence on foreign oil, and reduce our greenhouse gas emissions. Choosing a more environmentally friendly electricity source can also improve your organization's environmental image.

Aggregated Purchasing

With restructuring, energy users will be able to aggregate their loads and negotiate power purchases in greater volume and at lower cost. Aggregated load contracts offer a desirable way to reduce total demand surcharges, since the demand peaks of individual facilities can be averaged out over various, geographically separate facilities. A detailed understanding of your energy usage, including load size and usage patterns, will be essential, as these factors will significantly influence the price of your electricity.

Energy Management

Controlling peak demand offers an important opportunity for energy managers to find cost-savings. Peak demand is defined as the highest kW usage during the billing period. Energy and facility managers should know when a building is reaching peak

[1] Inventory of Greenhouse Gas Emissions and Sinks: 1990-1997.

[2] Ibid.

Ask the Energy Expert

Have a Question?
Get your maintenance, financing, communications, and Partnership questions answered by e-mailing Sol Salinas, *The Bulletin* Editor, at salinas.sol@epa.gov. Answers to technical questions and other technical tips are also available on the Ally Services and Products (ASAP) Directory on the Web at: www.epa.gov/asap.

The Bulletin Subscription Information

The Bulletin is distributed on the first Monday of every month to more than 6,000 ENERGYSTAR Buildings and Green Lights participants and friends.

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demand so they can take action to minimize the peak and avoid a demand ratchet. Utilities use a demand ratchet, based on peak demand, to determine minimum demand charges for future months. Controlling demand is important to obtaining optimal pricing.

Energy Efficiency

Many utilities will implement pricing plans charging customers different rates at different times of the day or days of the week. During peak demand times, prices are likely to be higher. Electricity customers with comprehensive energy management plans and energy-efficient lighting and building technologies in place will be better situated to take advantage of these pricing plans by both lowering their demand when prices are high and reducing their usage over time.

Likewise, customers that are not familiar with their energy consumption profiles and have not incorporated energy-efficient technologies will be more vulnerable to higher peak demand energy costs.

The Role of ENERGY STAR Buildings

Even with the savings that deregulation may bring about – and it should be remembered that in certain regions, prices may actually increase – there is still the clear potential for sustained long-term savings through energy efficiency. Taking a strategic approach to managing energy expenditures will help organizations make the most of these new marketplace opportunities.

The ENERGY STAR Buildings five-stage strategy is one approach designed to reduce electricity loads and generate maximum return on investment. As an ENERGY STAR Buildings and Green Lights participant, you are already on your way to positioning your organization to succeed in the restructured electric utility environment.

EPA to Release Guide on Electric Utility Restructuring and Energy Efficiency
The U.S. Environmental Protection Agency will soon release a new guide entitled "Preparing Public Institutions for the New Energy Marketplace: Electric Utility Restructuring and Energy Efficiency." The objective of the guide is to provide state and local officials and energy professionals with a tool to help them understand the complex issues surrounding electric utility restructuring and the role that energy efficiency measures play in reducing total costs.

The guide is arranged into five sections:

- Part I: Regulation – History and Future
- Part II: Energy Purchasing – Supply Options
- Part III: Energy Management – Demand Options
- Part IV: Linking Demand and Supply for Maximum Benefits
- Part V: ENERGY STAR Buildings – Sustainable Energy Management in the New Marketplace

The 20-page guide includes several case studies that illustrate successful power-purchasing and energy-efficiency initiatives at public institutions around the country. A list of related Internet resources and printed publications provides readers with places to look for more information.

Look for "Preparing Public Institutions for the New Energy Marketplace: Electric Utility Restructuring and Energy Efficiency" on the Web at: www.epa.gov/buildings.